



## Addendum to ACS380 Hardware Manual Rev E (3AXD5000029274)

### Technical Data / Alternate Short Circuit Protection

ABB UL file E211945 Volume 15, Section 1 lists the ABB Type E manual motor protectors MS132 & S1-M3-25 and MS165 as an alternate to UL classified fuses as a means of branch circuit protection. This is in accordance with the National Electrical Code (NEC). When the correct ABB Type E manual motor protector is selected from the table and used for branch circuit protection the drive is suitable for use in a circuit capable of delivering not more than 65 kA RMS symmetrical amperes at the drive maximum rated voltage. See the following table for the ACS380 drive and MMP combinations listed in the UL file.

**Combinations of Type E MMP's and drives installed with UL Type 1 kits are NOT included in the listing.** Drive & MMP combinations must be assembled in an enclosure conforming to minimum enclosure volume.

See reverse for data table. Notes below.

- 1 All manual motor protectors listed are Type E self-protected up to 65 kA. See ABB publication 2CDC131060M0202 - Manual Motor Starters Guide for complete technical data on the ABB Type E manual motor protectors. In order for these manual motor protectors to be used for branch circuit protection, they must be UL listed Type E manual motor protectors, otherwise they can be used only as an At Motor Disconnect. "At Motor Disconnect" is a disconnect just ahead of the motor on the load side of the panel.
- 2 Manual motor protectors may require adjusting the trip limit from the factory setting at or above the drive input Amps to avoid nuisance tripping. If the manual motor protector is set to the maximum current trip level and nuisance tripping is occurring, select the next size MMP. (MS132-10 is the highest size in the MS132 frame size to meet Type E at 65kA; next size up is MS165-16.)
- 3 Requires use of the S1-M3-25 line side feeder terminal with the manual motor protector to meet Type E self-protection class.
- 4 480Y/277V delta systems only: Short-circuit protective devices with slash voltage ratings (e.g. 480Y/277 VAC) can be applied only in solidly grounded networks where the voltage from line-to-ground does not exceed the lower of the two ratings (e.g. 277 V AC), and the voltage from line-to-line does not exceed the higher of the two ratings (e.g. 480 V AC). The lower rating represents the device's interrupting capability per pole.
- 5 For all drives, the enclosure must be sized to accommodate the specific thermal considerations of the application as well as provide free space for cooling. For UL compliance the minimum enclosure volume is specified in the UL listing when applied with the ABB Type E MMP shown in the table. ACS380 drives are intended to be mounted in an enclosure, unless a NEMA-1 kit is added. See the applicable ABB HW Manual for free space requirements.
- 6 Branch circuit short-circuit protection for group installation by circuit breakers: Suitable for motor group installation on a circuit that is capable of delivering no more than 65 kA RMS symmetrical amperes, 480 V max. Use a circuit breaker with an interrupting rating of no less than 65 kA RMS symmetrical amperes, 480 V max.

To obtain the most current product documentation go to [www.abb.com](http://www.abb.com) and select Offerings/Low Voltage AC Drives to navigate to the complete Hardware Manual for the appropriate drive

Type Code	Frame	Input Amps $I_N$	MMP Type E <sup>1,2</sup>	Min. Encl. Vol. (cu in) <sup>5</sup>	Maximum MMP Size for Group Installation <sup>6</sup>
<b>1 Phase, 200 - 240V</b>					
ACS380-040x-02A4-1	R0	5.0	MS132-6.3 & S1-M3-25 <sup>3</sup>	1850	MS162-20
ACS380-040x-03A7-1	R0	7.8	MS132-10 & S1-M3-25 <sup>3</sup>	1850	MS162-20
ACS380-040x-04A8-1	R1	10.1	MS165-16	1850	MS162-20
ACS380-040x-06A9-1	R1	14.5	MS165-16	1850	MS162-20
ACS380-040x-07A8-1	R1	16.4	MS165-20	1850	MS162-20
ACS380-040x-09A8-1	R2	20.6	MS165-25	1850	MS162-32
ACS380-040x-12A2-1	R2	25.6	MS165-32	1850	MS162-32
<b>3 Phase, 200 - 240V</b>					
ACS380-040x-02A4-2	R1	3.6	MS132-6.3 & S1-M3-25 <sup>3</sup>	1850	MS165-20
ACS380-040x-03A7-2	R1	5.6	MS132-10 & S1-M3-25 <sup>3</sup>	1850	MS165-20
ACS380-040x-04A8-2	R1	7.2	MS132-10 & S1-M3-25 <sup>3</sup>	1850	MS165-20
ACS380-040x-06A9-2	R1	10.4	MS165-16	1850	MS165-20
ACS380-040x-07A8-2	R1	11.7	MS165-16	1850	MS165-20
ACS380-040x-09A8-2	R1	14.7	MS165-20	1850	MS165-20
ACS380-040x-12A2-2	R2	18.3	MS165-25	1850	MS165-25
ACS380-040x-17A5-2	R3	24.6	MS165-32	1850	MS165-42
ACS380-040x-25A0-2	R3	35.1	MS165-42	1850	MS165-42
ACS380-040x-032A-2	R3	45.0	MS165-54	4577	MS165-80
ACS380-040x-048A-2	R4	57.6	MS165-80	4577	MS165-80
ACS380-040x-055A-2	R4	60.0	MS165-80	4577	MS165-80
<b>3 Phase, 440, 460, 480V <sup>4</sup></b>					
ACS380-040x-01A8-4	R0	2.6	MS132-4.0 & S1-M3-25 <sup>3</sup>	1850	MS165-20
ACS380-040x-02A6-4	R1	3.4	MS132-6.3 & S1-M3-25 <sup>3</sup>	1850	MS165-20
ACS380-040x-03A3-4	R1	4.8	MS132-6.3 & S1-M3-25 <sup>3</sup>	1850	MS165-20
ACS380-040x-04A0-4	R1	5.4	MS132-10 & S1-M3-25 <sup>3</sup>	1850	MS165-20
ACS380-040x-05A6-4	R1	7.7	MS132-10 & S1-M3-25 <sup>3</sup>	1850	MS165-20
ACS380-040x-07A2-4	R1	9.6	MS165-16	1850	MS165-20
ACS380-040x-09A4-4	R1	12.2	MS165-16	1850	MS165-20
ACS380-040x-12A6-4	R2	17.6	MS165-20	1850	MS165-25
ACS380-040x-17A0-4	R3	22.4	MS165-32	1850	MS165-42
ACS380-040x-25A0-4	R3	33.6	MS165-42	1850	MS165-42
ACS380-040x-032A-4	R4	37.9	MS165-54	4577	MS165-80
ACS380-040x-038A-4	R4	44.7	MS165-65	4577	MS165-80
ACS380-040x-045A-4	R4	49.8	MS165-73	4577	MS165-80
ACS380-040x-050A-4	R4	50.4	MS165-80	4577	MS165-80